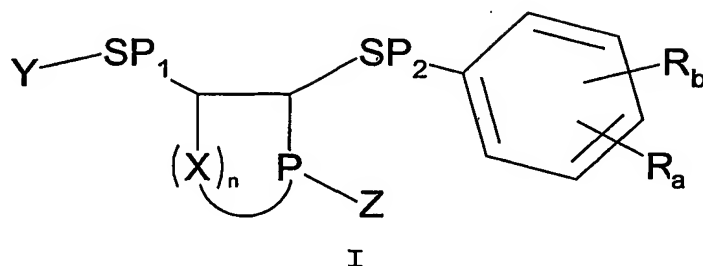


Claims

1. A compound according to formula I



wherein

P represents  $-N<$  or  $-C=$ ,

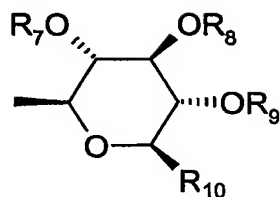
X represents independently of each other  $-CH_2-$ ,  $CR_1$  ( $sp_2$ -hybridised), O,  $-NH-$ ,  $=N-$ ,  $-CO-$  or  $-CS-$ , wherein  $R_1$  represents H or  $NR_2$ , wherein  $R_2$  represents H or lower alkyl, which optionally is linked to Z such that a bicyclic structure is formed;

n represents 1 or 2,

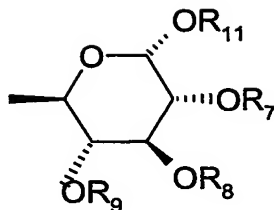
$R_a$  represents H, lower alkyl,  $-OR_3$ ,  $-O(CO)R_3$ ,  $-O(CO)OR_3$ ,  $-O(CO)NR_3R_4$ ,  $-NR_3R_4$ ,  $-NR_3(CO)R_4$ ,  $-COOR_3$ ,  $-CONR_3R_4$ ,  $-CH=CHCOOR_3$ ,  $-CF_3$ ,  $-CN$ ,  $-NO_2$ ,  $SO_3H$ ,  $PO_3H$  or halogen, wherein  $R_3$  and  $R_4$  represent H or lower alkyl,

$R_b$  represents H, OH,  $-OSO_2Me$ ,  $-OSO_2W$  wherein W represents optionally substituted aryl or heteroaryl,  $-OCO(CHOH)_2COOR_5$  wherein  $R_5$  represents H or lower alkyl; or represents the formula  $-Sp_3-R_6$ , wherein  $Sp_3$  represents a covalent bond,  $-O-$ ,  $-OCH_2-$ ,  $-OSO_2CH_2-$ ,  $-OSO_2-$ ,  $-OSO_2-(p)C_6H_4O-$  and  $R_6$  represents one of carbohydrate structures A-D:

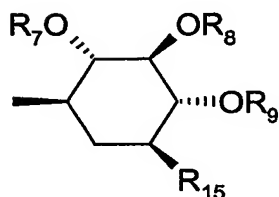
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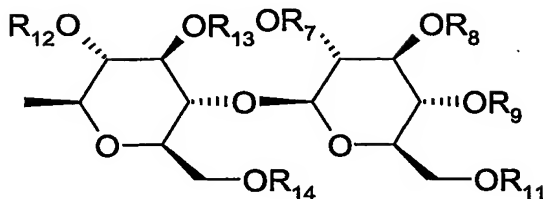
A



B



C



D

wherein

$R_7$ ,  $R_8$ ,  $R_9$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{13}$  and  $R_{14}$  represent independently of each other H, lower alkyl, aryl(lower alkyl), -CO-lower alkyl, -CO-aryl, -SO<sub>3</sub><sup>-</sup> or -PO<sub>3</sub><sup>-</sup>,

$R_{10}$  represents -CH<sub>2</sub>OR<sub>16</sub> or -COOR<sub>17</sub>, and

$R_{15}$  represents -CH<sub>2</sub>OR<sub>16</sub>, -COOR<sub>17</sub>, -CH<sub>2</sub>NH<sub>2</sub>, -CH<sub>2</sub>OPO<sub>3</sub><sup>-</sup> or -CH<sub>2</sub>OSO<sub>3</sub><sup>-</sup>, wherein  $R_{16}$  and  $R_{17}$  independently of each other represent H, lower alkyl, aryl(lower alkyl), -CO-lower alkyl, -CO-aryl, -SO<sub>3</sub><sup>-</sup> or -PO<sub>3</sub><sup>-</sup>,

Z represents optionally substituted aryl or heteroaryl,

Sp<sub>1</sub> represents a spacer unit, such as a straight-chain or branched lower alkyl group -(CH<sub>2</sub>)<sub>p</sub>-, wherein p is from 2-6, which is unsubstituted, mono or poly-substituted by -OH, -OR<sub>18</sub>, halogen or cyano group, wherein one or more -CH<sub>2</sub>- groups may independently be replaced by -O-, -CO-, -CO-O-, -O-CO-, -NR<sub>19</sub>-, -NR<sub>19</sub>-CO-, -CO-NR<sub>19</sub>-, -CH=CH-, -C≡C- and wherein  $R_{18}$  and  $R_{19}$  represent a hydrogen atom or lower alkyl;

Sp<sub>2</sub> represents an optional spacer unit, such as a covalent bond or a straight-chain or branched lower alkyl group -

$(CH_2)_q-$ , wherein  $q$  is from 1-6, which is unsubstituted, mono or poly-substituted by  $-OH$ ,  $-OR_{20}$ , halogen or cyano group, wherein one or more  $-CH_2-$  groups may independently be replaced by  $-O-$ ,  $-CO-$ ,  $-CO-O-$ ,  $-O-CO-$ ,  $-NR_{21}-$ ,  $-NR_{21}-CO-$ ,  $-CO-NR_{21}-$ ,  $-CH=CH-$ ,  $-C\equiv C-$  and wherein  $R_{20}$  and  $R_{21}$  represents a hydrogen atom or lower alkyl;

$Y$  represents optionally substituted aryl or heteroaryl,

with the proviso, that if  $P = -N<$ ,  $n=1$ ,  $X = -CO-$  and  $Sp_2$  represents a covalent bond,  $R_6$  may not represent carbohydrate structures A or D for  $Sp_3 = -O-$  and  $R_6$  may not represent carbohydrate B for  $Sp_3 = -OCH_2-$ .

2. A compound according to claim 1,

with the proviso, that if  $P = -N<$ ,  $n=1$ ,  $X = -CO-$  and  $Sp_2$  represents a covalent bond,  $R_b$  may not represent H or OH and  $Sp_3$  may not represent a covalent bond,  $-O-$  or  $-OCH_2-$ .

3. A compound according to claims 1 or 2 wherein  $P = -N<$ ,  $n = 1$  and  $X = -CO-$ ,  $-CS-$ ,  $-CH_2-$  or  $-NH-$ .

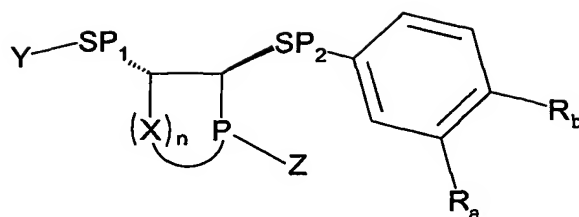
4. A compound according to claims 1 or 2 wherein  $P = -N<$ ,  $n = 1$  and  $X = -CS-$ ,  $-CH_2-$  or  $-NH-$ .

5. A compound according to claims 1 or 2 wherein  $P = -N<$  and  $-(X)_n = -OOC-$ ,  $-COO-$ ,  $-CONH-$ ,  $-CH=N-$ .

6. A compound according to claims 1 or 2 wherein  $P = -C=$  and  $-(X)_n = -NH-N=$  or  $-O-N=$ .

7. A compound according to claims 1 or 2 having the formula IVa

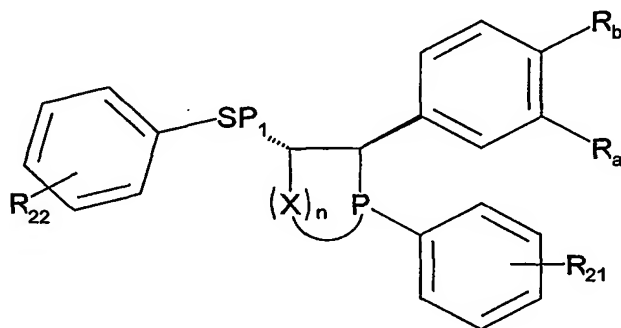
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IVa

wherein  $R_a$ ,  $R_b$ ,  $Sp_1$ ,  $Sp_2$ ,  $P$ ,  $X$ ,  $Y$ ,  $Z$  and  $n$  are as defined in claims 1 or 2.

8. A compound according to claims 1 or 2 having the formula IVb,



IVb

wherein  $R_a$ ,  $R_b$ ,  $Sp_1$ ,  $P$ ,  $X$  and  $n$  are as defined hereinabove and wherein  $R_{21}$  and  $R_{22}$  represent H, lower alkyl, lower alkoxy or halogen.

9. A compound according to claims 7 or 8 wherein  $P = -N<$ ,  $n = 1$  and  $X = -CO-$ ,  $-CS-$ ,  $-CH_2-$  or  $-NH-$ .
10. A compound according to claims 7 or 8 wherein  $P = -N<$ ,  $n = 1$  and  $X = -CS-$ ,  $-CH_2-$  or  $-NH-$ .
11. A compound according to claims 7 or 8 wherein  $P = -N<$  and  $-(X)_n = -OOC-$ ,  $-COO-$ ,  $-CONH-$ ,  $-CH=N-$ .
12. A compound according to claims 7 or 8 wherein  $P = -C=$  and  $-(X)_n = -NH-N=$  or  $-O-N=$ .
13. A pharmaceutical composition comprising a therapeutically

effective amount of a compound of any preceding claim with a pharmaceutically acceptable carrier.

14. A pharmaceutical composition according to claim 13 for the treatment or prevention of arteriosclerosis or for the reduction of cholesterol levels.
15. A kit comprising a pharmaceutical composition according to claim 13 for use in the treatment or prevention of arteriosclerosis or for the reduction of cholesterol levels.
16. A method for the treatment or prevention of arteriosclerosis or for the reduction of cholesterol levels comprising administering to a subject in need of such treatment an effective amount of a compound according to claims 1 to 12.
17. Use of a compound according to claims 1 to 12 for the manufacture of a medicament for the treatment or prevention of arteriosclerosis or for the reduction of cholesterol levels.